

Industrial Facilities (Non-Military)

DIRECTORATE OF INTELLIGENCE

# Basic Imagery Interpretation Report

Chan-chiang Chemical Fertilizer Plant Chan-chiang, China

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### **Top Secret**

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#### INTRODUCTION

The Chan-chiang Chemical Fertilizer Plant is the largest producer of phosphate fertilizers in Kwangtung Province. It is located approximately 1.8 nautical miles (nm) south-southwest of the center of Chan-chiang near Kuang-chou Bay (Figure I). A water treatment facility, situated approximately 0.2 nm northwest, supplies water to the plant. A partially constructed chemical plant (not shown on photograph) just south of the fertilizer plant appears to have been abandoned since November 1964.

All available photographic coverage of the plant during the period from August 1963 to September 1967 was used in this study.

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BASIC DESCRIPTION

#### Physical Features

The fertilizer plant, rectangular in shape, measures approximately 1,650 feet by 860 feet and occupies about 35 acres. It is both rail and road served and partially secured by a wall on three sides (Figures 2 and 3).

#### Operational Functions

The primary function of this installation is the production of phosphate fertilizers. The plant consists of two primary production areas: one for sulfuric acid and the other for fertilizers. The production components are depicted and annotated on Figure 3.

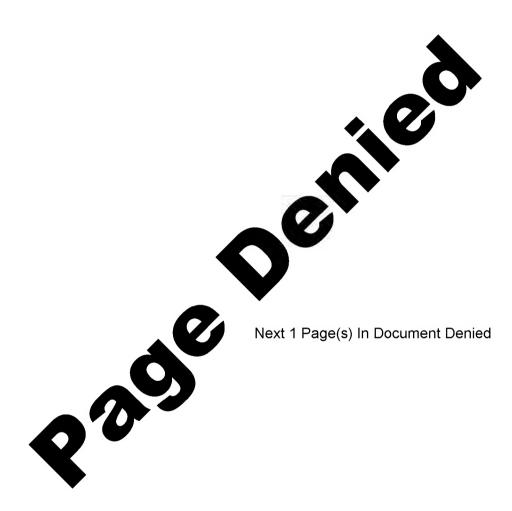
The arrangement of the buildings and the flow of raw materials at this plant are not as simple and direct as normally seen at superphosphate plants. Both incoming phosphate ore and finished fertilizer are stored in the same building (Item 2). The fertilizer production area contains two mixing sections, each with a pipeline connection to the adjacent contact sulfuric acid plant. One of these mixing sections (Item 4) is for superphosphate production. There is evidence, however, that the second mixing section (Item 5) may be used for the production of triple superphosphate. This section has associated equipment which is not needed for superphosphate production. There is a good possibility that part of the phosphate ore is treated here with concentrated sulfuric acid to produce phosphoric acid by the wet process. This is substantiated by the second acid pipeline that ties in with a probable tall absorber and other processing equipment. If phosphoric acid is produced here, triple superphosphate could be made in a process that closely parallels that of superphosphate production. Such a fertilizer has a higher phosphorus content than superphosphate.

A probable by-products processing section and several support buildings are situated on the northwest edge of the plant next to the wall. An open storage area lies to the southeast of the plant.

#### Status and Activity

Analysis of photography of August 1963 showed the Chan-chiang Chemical Fertilizer Plant to be in the late stages of construction. All buildings in the phosphate fertilizer production area were complete except for the mixing and possible phosphoric acid production sections, which were not yet started. Construction on the sulfuric acid plant was in mid-stage. Photographic coverage of November 1964 indicated that all of the major components of the plant were complete and in operation. Analysis of all subsequent coverage through September 1967 revealed no major changes in facilities, while rail traffic and stockpiles indicated the plant was in operation.

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